



John A. Logan College

Associate in Engineering Science Degree in Electrical Engineering

Transfer Curriculum AES 0096
Associate in Engineering Science:
66-67 Hrs. Min.
Major Code: 1.1 141001
Effective Date: Fall 2020

GENERAL EDUCATION (IAI GECC, 27-39 CREDITS)

The Illinois Articulation Initiative (IAI) General Education Core Curriculum (GECC) requires 27 to 39 credit hours from the following five areas: communication; mathematics; physical and life sciences; humanities; and social and behavioral sciences. Courses selected to meet IAI GECC requirements may also meet course requirements for a specific major.

Consult with the transfer institution to determine if certain courses require a grade of "C" or higher, or if there is a minimum grade point average for admission to your declared major. Please select courses on this guide in accordance with the Articulation Notes for your transfer institution.

FIRST SEMESTER (FALL)

| Dept. | No. | | Hrs. | Grade |
|-------|-----|-------------------------------------|------|-------|
| MAT | 131 | Calculus I | 5 | _____ |
| EGR | 101 | Engineering Graphics or Elective*** | 3 | _____ |
| ENG | 101 | English Composition I | 3 | _____ |
| CHM | 151 | Chemical Principles | 5 | _____ |
| ORI | 100 | College 101 | 1 | _____ |
| | | | 17 | |

Fall Only Courses:

EGR 101
CHM 201
CPS 215
MAT 202
PHY 201
PHY 206

Spring Only Courses:

CHM 202
CPS 206
MAT 205
PHY 202
PHY 203
PHY 214/224

*Recommended Social Science Electives: ANT 111, ANT 202, ANT 216, GEO 112, SOC 215. For other IAI Social Science Electives, see below.

**Recommended Humanities/Fine Arts Electives: HIS 103, HIS 104, HIS 213, LIT 284, LIT 295, PHL 200. For other IAI Humanities, see below.

SECOND SEMESTER (SPRING)

| Dept. | No. | | Hrs. | Grade |
|-------|-----|---|------|-------|
| MAT | 201 | Calculus II | 5 | _____ |
| PHY | 205 | University Physics I | 5 | _____ |
| CPS | 206 | Computer Science I or CHM 152 Chemical Principles with Qualitative Analysis*** | 4-5 | _____ |
| ENG | 102 | English Composition II | 3 | _____ |
| | | | 17 | |

***Choose electives based on your chosen transfer institution requirements.

IAI INFORMATION: This guide follows the guidelines established by the IAI Engineering major Panel for an Associates in Engineering Science Degree. This guide is not designed to complete the full IAI GECC component. You will need to fulfill the remaining IAI GECC courses at your transfer institution.

IAI Fine Arts Electives:

Art: ART 111, 220, 221, 291
Literature: LIT 275
Music: MUS 105, 225
Theater: THE 113

IAI Humanities Electives:

Foreign Language: FRE 202, GER 202, SPN 202
History: HIS 101, 102, 213
Literature: LIT 210, 230, 235, 264, 280, 281, 284, 295
Philosophy: PHL 111, 121, 131, 200, 260

THIRD SEMESTER (FALL)

| Dept. | No. | | Hrs. | Grade |
|-------|-----|--|-------|-------|
| MAT | 202 | Calculus III | 3 | _____ |
| PHY | 206 | University Physics II | 5 | _____ |
| ECO | 201 | Microeconomics or Social Science Elective* | 3 | _____ |
| | | Humanities/Fine Arts Elective** | 3 | _____ |
| | | Life Science Elective | 3-4 | _____ |
| | | | 17-18 | |

IAI Social and Behavioral Sciences Electives:

Anthropology: ANT 111, 202, 216, 240
Economics: ECO 201, 202
Geography: GEO 112
History: HIS 103, 104, 201, 202
Political Science: PSC 131, 211, 212, 213, 289
Psychology: PSY 132, 200, 203, 262
Sociology: SOC 133, 215, 263, 264

FOURTH SEMESTER (SPRING)

| Dept. | No. | | Hrs. | Grade |
|-------|-----|---|-------|-------|
| MAT | 205 | Differential Equations | 3 | _____ |
| PHY | 224 | Electric Circuit Analysis w/Lab or | | |
| PHY | 214 | Intro to Circuit Analysis | 4-3 | _____ |
| ECO | 202 | Microeconomics or Social Science Elective* | 3 | _____ |
| | | Fine Arts/Humanities Elective** | 3 | _____ |
| COM | 115 | Speech | 3 | _____ |
| | | | 15-16 | |

IAI Life Science Electives:

Biology: BIO 100, 101, 105, 225
Interdisciplinary: PHS 101 with PHS 111, SCI 210A and SCI 210B
Life Science: SCI 215

Please see your advisor for possible specific four-year university transfer guides.

ARTICULATION NOTES: Consult your academic advisor and/or transfer institution to assess if any courses required for your major require a grade of C or higher and if there is a minimum grade point average needed for admission consideration into your major.

IAI ENGINEERING MAJOR PANEL INFORMATION

Take MAT131-5 (MTH 901), MAT 201-5 (MTH 902), MAT 202-3 (MTH 903), MAT205-3 (MTH 912). Take CHM 151-5 (MTH 912), PHY 205-5 (PHY 911), PHY 206-5 (PHY 912) and CPS 206 (CS 911).

ECO 201 (S3 902 is recommended for all Engineering specializations but required for Industrial Engineering. If two Social and Behavioral Science courses

are selected, a two course sequence in the same discipline is recommended (ECO 201-S3 901. A non-Western cultures course within the U.S. recommended (ANT 202, LIT 284, 295, SOC 215, 221)

SIUE TRANSFER INFORMATION

SIUE offers a B.B. degree in Electrical Engineering. Take ENG 101 (ENG 101), ENG 102 (ENG 102), COM 116 (ACS103), MAT 131 (MATH 150), MAT 201 (MATH 152), MAT 202 (MATH 250) and MAT 205 (MATH 305). Take ECO 201 (ECON 111), PHY 205 (PHY 151) and PHY 214 or 215 (ECE 210). SIUE requires a CHEM 131, 135, PHYS 141,142. ECE 211 and CS 145 but equivalents are not currently available.

SIUC TRANSFER INFORMATION

SIUC offers a B.S. degree in Electrical Engineering with a Biomedical specialization and a Power and Energy Engineering specialization.

--BIOMEDICAL SPECIALIZATION.

Take COM 115 (CMST 101), ENG 101 (ENGL 101), ENG102 (ENGL 102), MAT 131 (MATH 150), BIO 225 (BIO 202), PHY 205 (PHYS 205A) and PHY 206 (PHYS 205B).

For the biomedical Specialization requirements, take PHY 205(PHYS 205A/255A), PHY 206 (PHYS 205B/255B), BIO225 (BIO 202, CHM 151 or BIO 205 (Science Elective with lab)

Take CPS 206 or 176 (ECE 222), PHY 214 (ECE 235) and PHY 224 (ECE 235L).

Take ECE Technical Electives that are approved by the ECE department. Take General Technical Electives approved by the ECE department.

--POWER and ENERGY ENGINEERING SPECIALIZATION

Take COM 115 (CMST 101), ENG 101 (ENGL 101), ENG 102 (ENGL 102), MAT 131 (MATH 150), BIO 225 (BIO 202) and PHY 205/206 (PHYS 205A/B)

For the power and energy engineering specialization requirements, further information was not available at the time of preparing this document.

UIUC TRANSFER INFORMATION

UIUC offers a degree in Electrical Engineering under the College of Engineering.

For admission consideration, the expected minimum GPA is a 3.00 (A=4.00).

The average GPA for admitted transfer students for the fall 2019 semester in Electrical Engineering was at 3.86.

Take ENG 101/102 (RHET 105), CHM 151 (CHEM 102/103), CHEM 152 (CHEM 104/105), MAT 131 (MATH 220), MAT 201 (MATH 231), PHY 205 (PHY 211), ECO 202 (ECON 102) or ECO 201 (ECON 103) and CPS 206 (CS 101 or CS 125).

Take MAT 202 (to obtain equivalency to MATH 241, a UIUC bridge course must be completed-MATH 292). Take PHY 206 (PHYS 212), PHY 201 (TAM 211), PHY 202 (TAM 212) and PHY 203 (TAM 251)

As a Graduation Requirement, students must complete a foreign language through the third level (FRE 201, GER 201 or SPN 201). This is not a requirement for admission.

OTHER

Of the other Illinois Public Senior Institutions, EIU (new in 2020), UIC and NIU offer a degree program in Electrical Engineering